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Bruhat Bengaluru Mahanagara Palike

CONSULTANCY SERVICES FOR THE PREPARATION OF

DETAILED PROJECT REPORT

Name of the Work: Consultancy Services for Detailed Project Report , Field Survey, General Report, Basic Drawing, Technical Report, Detailed Drawing, Detailed Cost Estimate for Improvements to road drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and Surrounding areas in ward no-08. New ward No-12

ESTIMATED COST OF THE PROJECT: 3.00 Cr

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The Modern Construction Solution

#1059, MIG-A Sector, Opp Railwheel Factory
Yelahanka New Town, Bangalore-560064
CELL: 8048505503

DETAILED PROJECT REPORT

Project Name : Consultancy service for detailed project report, field survey, general report, basic drawing, technical report, detailed drawing, detailed cost estimate for improvements to roads, drains and other allied works in Tatanagar, LKR nagar, Devinagar, Bhadrappa Layout and surrounding areas in ward no. 08, new ward no. 12 .

CONTENTS:

1. Sector Background Context & Broad Project Details. General, Objectives
2. Project Definition, Concept and Scope
3. Project Deliverables
4. Structure of the Detailed Project Report (Existing Scenario)
5. Project Cost
6. Project Benefits Assessment (Social Cost-Benefit Assessment)

1. Introduction:

The Detailed Project Report (DPR) is an essential Roads for the improvement for the work of Improvements to roads and drains at Consultancy Services for preparation of Survey, Drawing, Estimate preparation etc., (Detailed Project Report) For the work of Development of Roads, Drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and surrounding areas in Ward no. 08, New Ward no. 12

AARTAN ASSOCIATES BANGALORE

Sahakara Nagar is a residential suburb near Bangalore, India. Sahakara nagar is formed by the Ministry of Communication Employees housing society and has developed to this extent under the efforts of the Sahakara nagar Residents welfare association. Ever since the inclusion of 45 new wards to Bangalore city in 2008, Sahakara Nagar comes under the BBMP (Bruhat Bengaluru Mahanagara Palike) limits. The locality is accessible via NH 7 on the East. Sahakara Nagar was formed in the early 1980s as a co-operative society for Telecom and Post & Telegraph employees of the Government of India. It has over 8 well maintained parks and two Playgrounds maintained by BBMP. Owing to its proximity to Hebbal lake, Amrutahalli lake and GKVK forest land, Sahakara Nagar is often called the Prague of Bengaluru city.

Sahakara Nagar comes in parts, under both Byatarayanapura and Kodigehalli wards of the BBMP, and is flanked by Hebbal, Tata Nagar, Thindlu and Vidyaranyapura However, Sahakara Nagar is located outside the bounds of Bangalore City but is near to Kempegowda International Airport .

Project is located on the heart of the Shakara Nagar and BBMP has initiated to improve various Roads & at various location which have the immediate requirements & within the allocated Budget through various schemes. Main Objective of the work is to carryout the Improvements on various Roads and Drains to streamline the flood waters and Improve the Roads .

Because of heavy Rain many parts of the Roads and Drains has been damaged in the area and is became essentials to Improve the same to Improve the connectivity and smooth runoff of water during the Rain.

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AARTN ASSOCIATES has carried out the intensive survey as well as taken the guide lines of the Department Engineers for various Roads and Drains which are immediate essentials for Improvements.

Also taken inventory survey for various existing structures and field Investigation and suggested for Improvements for the existing Roads, Drains and Culverts as well as suggested for additional structures for smooth Run off for Rainwater avoiding water logs in the area.

After assessing the required Improvements in the designated area, and in consultation with Department Engineers and consideration of all survey and Technical Parameters AARTN ASSOCIATES has arrived at the followings:

The Detailed Project Report has been accompanied with followings.

1. Project Location (Google Map with Autocad Drawings) followed with Typical Cross Sections
2. Preliminary Cost Estimate with Unit Rates, Project Costing and Total Project Cost (BOQ) and Sequence of Works.

CONCLUDES

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ABSTRACT

BRUHAT BENGALURU MAHANAGARA PALIKE

Executive Engineer - Byatarayanapura Division

ABSTRACT

Name of Work - Improvements to Roads, Drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and surrounding areas in Ward no. 08, New Ward no. 12

Sl. No	Description of Item	Amount
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.	721136.43
2	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.	2618891.35
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications	6784956.87
4	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications	6529085.07
5	Removing and Resetting of Slab	167226.00

6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick made of M25 with OPC cement @ 340kgs per Cum with 20 mm and Down size graded granite metal coarse agg @.70 mixed including providing and removing centering, shuttering, shuttering propping etc. for edges of slabs with TMT (Fe500) COM, labor, labor, all Lead and Lift, HOM, Curing, including Cost of reinf. Etc, Complete as directed by the Engineer In charge of Work**	4681393.92
7	**Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge.**	507729.60
8	**Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates**	62969.68
9	**Providing and fixing pre cast solid cement concrete kerb stones made out of M20 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete as directed by the Engineer in Charge of the work**	244881.00
10	**Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surface**	15806.18
11	**Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density**	157319.32

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12	**Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means**	14457.08
13	**Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom.**	39175.75
14	**Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects**	404418.57
15	**Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects**	1128529.75
16	**Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes**	111206.70
17	**Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km**	721372.16
	Sub - Total	**24910555.42**
	18% GST	4483899.98
		29394455.39
	DPR 1% including GST	**300000.00**
	PMC 1% including GST	**300000.00**
	Miscellaneous & Rounding off	5544.61
	Grand Total	**30,000,000.00**

Consultant
Aarth Associates

Assistant Engineer
Ward - 12

Assistant Executive Engineer
Kodigehalli Sub-Division

Executive Engineer
Byatarayanapura Division

ESTIMATES

BRUHAT BANGALORE MAHANAGARA PALIKE

Executive Engineer-Byatarayanapura

Detailed Estimate

Name of the Work : Improvements to Roads, Drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and surrounding areas in Ward no. 08, New Ward no. 12

								Estimate Amount in Rs	30000000.00
Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
		Cum							
	Basic rate	186.00							
	Sub Total	186.00							
	Area weightage 10%	18.60							
	Sub Total	204.60							
	Drain								
	6Th Main Road LHS		1.00	161.00	1.10	1.00	177.10		
	6Th Main Road RHS		1.00	322.00	1.10	1.00	354.20		
	6Th main Road LHS 2nd cross LHS		2.00	78.00	1.10	1.00	171.60		
	6Th main Road LHS 4th cross B/S		2.00	82.00	1.10	1.00	180.40		
	6Th main Road RHS 4th cross B/S		2.00	68.00	1.10	1.00	149.60		
	6Th main Road LHS 5th cross B/S		2.00	66.00	1.10	1.00	145.20		
	6th main Road RHS 5th cross B/S		2.00	73.00	1.10	1.00	160.60		
	6th main Road LHS 7th cross B/S		1.00	36.00	1.10	1.00	39.60		
	6th main Road RHS 7th cross B/S		2.00	82.00	1.10	1.00	180.40		
	6th main Road LHS 8th cross B/S		2.00	37.00	1.10	1.00	81.40		
	6th main Road RHS 8th cross B/S		2.00	84.00	1.10	1.00	184.80		
	6th main Road LHS 9th cross B/S		2.00	30.00	1.10	1.00	66.00		
	6th main Road RHS 9th cross B/S		2.00	77.00	1.10	1.00	169.40		
	6th main Road LHS 10th cross B/S		2.00	27.00	1.10	1.00	59.40		
	6th main Road RHS 10th cross S/S		1.00	76.00	1.10	1.00	83.60		
	5th Main Road start from 7th cross Jn.LHS		1.00	128.00	1.10	1.00	140.80		
	5th Main Road start from 7th cross Jn.RHS		1.00	113.00	1.10	1.00	124.30		
	8th Main Road RHS		1.00	254.00	1.10	1.00	279.40		
	8th Main Road LHS		1.00	211.00	1.10	1.00	232.10		
	Kalpataru Appt.Road		1.00	153.00	1.10	1.00	168.30		
				2158.00					
	Drain Desilting								
	Desilting for Removal and reseting of slab area		2.00	431.60	0.45	0.40	155.38		
	Bhadrappa Layout and its sorrounding areas		2.00	138.00	0.45	0.40	49.68		
	Culvert Desilting		35.00	6.00	0.60	0.40	50.40		
	Culvert								
	Bhadrappa Layout and its sorrounding areas(Excavation)		12.00	6.00	1.40	1.20	120.96		
							3524.62	204.60	721136.43

Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
		Cum							
	Basic rate	5752							
	Area weightage 10%	575.2							
	Total	6327.2							
	Drain								
	6Th Main Road LHS		1	161.00	0.9	0.15	21.74		
	6Th Main Road RHS		1	322.00	0.9	0.15	43.47		
	6Th main Road LHS 2nd cross LHS		2	78	0.9	0.15	21.06		
	6Th main Road LHS 4th cross B/S		2	82	0.9	0.15	22.14		
	6Th main Road RHS 4th cross B/S		2	68	0.9	0.15	18.36		
	6Th main Road LHS 5th cross B/S		2	66	0.9	0.15	17.82		
	6th main Road RHS 5th cross B/S		2	73	0.9	0.15	19.71		
	6th main Road LHS 7th cross B/S		1	36	0.9	0.15	4.86		
	6th main Road RHS 7th cross B/S		2	82	0.9	0.15	22.14		
2	6th main Road LHS 8th cross B/S		2	37	0.9	0.15	9.99		
	6th main Road RHS 8th cross B/S		2	84	0.9	0.15	22.68		
	6th main Road LHS 9th cross B/S		2	30	0.9	0.15	8.10		
	6th main Road RHS 9th cross B/S		2	77	0.9	0.15	20.79		
	6th main Road LHS 10th cross B/S		2	27	0.9	0.15	7.29		
	6th main Road RHS 10th cross S/S		1	76	0.9	0.15	10.26		
	5th Main Road start from 7th cross Jn.LHS		1	128	0.9	0.15	17.28		
	5th Main Road start from 7th cross Jn.RHS		1	113	0.9	0.15	15.26		
	8th Main Road RHS		1	254.00	0.9	0.15	34.29		
	8th Main Road LHS		1	211.00	0.9	0.15	28.49		
	Kalpataru Appt.Road		1	153	0.9	0.15	20.66		
	For Drain wall Coping								
	Bhadrappa Layout and its sorrounding areas		4	138	0.15	0.15	12.42		
	Culvert								
	Bhadrappa Layout and its sorrounding areas		12	6	1.4	0.15	15.12		
							413.91	6327.2	2618891.352
	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
		Cum							
	Basic rate	6256							
	For Form Work	312.8							
	Sub Total	6568.8							
	Area Wieght age @ 10%	656.88							
	Total Rate in Rs	7225.7							
	Drain								
	Bottom Raft								
	6Th Main Road LHS		1	161.00	0.9	0.15	21.74		
	6Th Main Road RHS		1	322.00	0.9	0.15	43.47		
	6Th main Road LHS 2nd cross LHS		2	78	0.9	0.15	21.06		
	6Th main Road LHS 4th cross B/S		2	82	0.9	0.15	22.14		
	6Th main Road RHS 4th cross B/S		2	68	0.9	0.15	18.36		

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Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	6Th main Road LHS 5th cross B/S		2	66	0.9	0.15	17.82		
	6th main Road RHS 5th cross B/S		2	73	0.9	0.15	19.71		
	6th main Road LHS 7th cross B/S		1	36	0.9	0.15	4.86		
	6th main Road RHS 7th cross B/S		2	82	0.9	0.15	22.14		
	6th main Road LHS 8th cross B/S		2	37	0.9	0.15	9.99		
	6th main Road RHS 8th cross B/S		2	84	0.9	0.15	22.68		
	6th main Road LHS 9th cross B/S		2	30	0.9	0.15	8.10		
	6th main Road RHS 9th cross B/S		2	77	0.9	0.15	20.79		
	6th main Road LHS 10th cross B/S		2	27	0.9	0.15	7.29		
	6th main Road RHS 10th cross S/S		1	76	0.9	0.15	10.26		
	5th Main Road start from 7th cross		1	128	0.9	0.15	17.28		
	5th Main Road start from 7th cross		1	113	0.9	0.15	15.26		
3	8th Main Road RHS		1	254.00	0.9	0.15	34.29		
	8th Main Road LHS		1	211.00	0.9	0.15	28.49		
	Kalpataru Appt.Road		1	153	0.9	0.15	20.66		
	Drain Side wall								
	6Th Main Road LHS		2	161.00	0.15	0.6	28.98		
	6Th Main Road RHS		2	322.00	0.15	0.6	57.96		
	6Th main Road LHS 2nd cross LHS		4	80	0.15	0.6	28.8		
	6Th main Road LHS 4th cross B/S		4	82	0.15	0.6	29.52		
	6Th main Road RHS 4th cross B/S		4	68	0.15	0.6	24.48		
	6Th main Road LHS 5th cross B/S		4	66	0.15	0.6	23.76		
	6th main Road RHS 5th cross B/S		4	73	0.15	0.6	26.28		
	6th main Road LHS 7th cross B/S		2	36	0.15	0.6	6.48		
	6th main Road RHS 7th cross B/S		4	82	0.15	0.6	29.52		
	6th main Road LHS 8th cross B/S		4	37	0.15	0.6	13.32		
	6th main Road RHS 8th cross B/S		4	84	0.15	0.6	30.24		
	6th main Road LHS 9th cross B/S		4	30	0.15	0.6	10.8		
	6th main Road RHS 9th cross B/S		4	77	0.15	0.6	27.72		
	6th main Road LHS 10th cross B/S		4	27	0.15	0.6	9.72		
	6th main Road RHS 10th cross S/S		2	76	0.15	0.6	13.68		
	5th Main Road start from 7th cross		2	128	0.15	0.6	23.04		
	5th Main Road start from 7th cross		2	113	0.15	0.6	20.34		
	8th Main Road RHS		2	254.00	0.15	0.6	45.72		
	8th Main Road LHS		2	211.00	0.15	0.6	37.98		
	Kalpataru Appt.Road		2	153	0.15	0.6	27.54		
				2160			902.25		
	Culvert								
	Bottom Raft								
	Bhadrappa Layout and its sorrounding		12	6	0.95	0.15	10.26		
							10.26		
	Side Wall								
	Bhadrappa Layout and its sorrounding areas		24	6	0.23	0.8	26.50		
							26.50		
							36.76		
							939.01	7225.68	6784956.874
	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications.(V-III, I.No 13.1 Page No 99, PWD SR 2021-22) issue rate dated 07-04-22								
	Basic Rate	103329							
	Area Weightage 10%	10333							
	Total Rate	113662							
4	For Drain	Cum					902.25		
		kg	Steel				54135.00		
		tonne				Tn	54.14		
	For Culvert	Cum					36.76		
		kg	Steel				3308.04		
		tonne				Tn	3.31		
							57.44	113661.9	6529085.068
	Removing and Resetting of Slab								
	Approved Rate on 18-06-2022								
		Sqm							

Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Approved rate	235							
	10% of BS Slab of Total Drain length		216				216.00		
5	10% of RCC Slab of Total Drain Length		216				216.00		
	for Badrapa Layout and its sorrounding area 10% of BS Slab		13.8				13.80		
	for Badrapa Layout and its sorrounding area 10% of RCC Slab		13.8				13.80		
	For Culvert		35	6.00	1.20		252.00		
							711.60	235	167226
	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick made of M25 with OPC cement @ 340kgs per Cum with 20 mm and Down size graded granite metal coarse agg @.70 mixed including providing and removing centering, shuttering, shuttering propping etc. for edges of slabs with TMT (Fe500) COM, labor, labor, all Lead and Lift, HOM, Curing, including Cost of reinf. Etc, Complete as directed by the Engineer In charge of Work (Data Rate)								
	New Drain Cover Slab	Sqm							
	Data rate	2072							
	6Th Main Road LHS from 1st Cross to 6th cross start		1	161.00	0.90		144.90		
	6Th Main Road RHS from 1st cross to 10th cross end		1	322.00	0.90		289.80		
	6Th main Road LHS 2nd cross LHS		2	78.00	0.90		140.40		
	6Th main Road LHS 4th cross B/S		2	82.00	0.90		147.60		
	6Th main Road RHS 4th cross B/S		2	68.00	0.90		122.40		
	6Th main Road LHS 5th cross B/S		2	66.00	0.90		118.80		
	6th main Road RHS 5th cross B/S		2	73.00	0.90		131.40		
	6th main Road LHS 7th cross B/S		1	36.00	0.90		32.40		
	6th main Road RHS 7th cross B/S		2	82.00	0.90		147.60		
6	6th main Road LHS 8th cross B/S		2	37.00	0.90		66.60		
	6th main Road RHS 8th cross B/S		2	84.00	0.90		151.20		
	6th main Road LHS 9th cross B/S		2	30.00	0.90		54.00		
	6th main Road RHS 9th cross B/S		2	77.00	0.90		138.60		
	6th main Road LHS 10th cross B/S		2	27.00	0.90		48.60		
	6th main Road RHS 10th cross S/S		1	76.00	0.90		68.40		
	5th Main Road start from 7th cross Jn.LHS		1	128.00	0.90		115.20		
	5th Main Road start from 7th cross Jn.RHS		1	113.00	0.90		101.70		
	8th Main Road RHS		1	254.00	0.90		228.60		
	8th Main Road LHS		1	211.00	0.90		189.9		
	Kalpataru Appt.Road		1	153.00	0.90		137.7		
							2575.8		
	Providing 80% of Total Length of desilting length for new slab						2060.64		
	Bhadrappa Layout and its sorrounding areas(80% of Total Length)		2	110.4	0.9		198.72		
							2259.36	2072	4681393.92
	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge. (Data Rate)								
7		Sqm							
	Data Rate	5037							
	Culvert cover Slab								
	Bhadrappa Layout and its sorrounding		12	6.00	1.40		100.80		
							100.80	5037	507729.6
	KERB								

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Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
8	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates (V-I, No-2.1.4, P.No-15 of PWD SR 2021-22).								
		Cum							
	Basic rate	5926							
	Area Weightage 10%	592.6							
	Total	6518.6							
	For Below Kerb Stone								
	6Th Main Road		1	483.00	0.20	0.10	9.66		
							9.66	6518.6	62969.676
9	Providing and fixing pre cast solid cement concrete kerb stones made out of M20 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete as directed by the Engineer in Charge of the work (Approved Rate)								
		Nos							
	Approved rate	507							
	6Th Main Road		1	483.00			483		
							483	507	244881
10	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces (V-III, P.No.56, I.No.8.10 of PW, PWD SR 2021-22)								
		Sqm							
	Basic Rate	85							
	Area Weightage 10%	8.5							
	Total Rate	93.5							
	6Th Main Road		1	483.00		0.35	169.05	93.5	15806.175
	Roads								
11	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density (V-III No-4.27 A,P No-24 of PWD BCSR 2021-22)								
		Cum							
	Basic rate	2394							
	10% AW	239.4							
	Sub Total	2633.4							
	For Bad Patches								
	6th main Road LHS 7th cross		1	36.00	0.90	0.20	6.48		
	6th main Road RHS 7th cross		1	82.00	0.60	0.20	9.84		
	6th main Road LHS 8th cross		1	37.00	0.70	0.20	5.18		
	6th main Road RHS 8th cross		1	84.00	0.60	0.20	10.08		
	6th main Road LHS 9th cross		1	30.00	0.75	0.20	4.50		
	6th main Road RHS 9th cross		1	77.00	0.60	0.20	9.24		
	6th main Road LHS 10th cross		1	27.00	0.70	0.20	3.78		
	6th main Road RHS 10th cross		1	76.00	0.70	0.20	10.64		
							59.74	2633.4	157319.316
	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means. (V-III, P.No-29,I No-5.1(i) of PWD SR 2021-22).								
		Sqm							
	Basic Rate	44							
	Area Weightage 10%	4.4							
	Total Rate	48.4							
	For Bad Patches								

Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
12	6th main Road LHS 7th cross B/S		1	36.00	0.90		32.40		
	6th main Road RHS 7th cross B/S		1	82.00	0.60		49.20		
	6th main Road LHS 8th cross B/S		1	37.00	0.70		25.90		
	6th main Road RHS 8th cross B/S		1	84.00	0.60		50.40		
	6th main Road LHS 9th cross B/S		1	30.00	0.75		22.50		
	6th main Road RHS 9th cross B/S		1	77.00	0.60		46.20		
	6th main Road LHS 10th cross B/S		1	27.00	0.70		18.90		
	6th main Road RHS 10th cross		1	76.00	0.70		53.20		
							298.70	48.4	14457.08
13	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom.(V-III, P.No-29,I No-5.3(i) of PWD SR 2021-22).								
		Sqm							
	Basic Rate	12							
	Area Weightage 10%	1.2							
	Total Rate	13.2							
	For Bad Patches								
	6th main Road LHS 7th cross B/S		1	36.00	0.90		32.40		
	6th main Road RHS 7th cross B/S		1	82.00	0.60		49.20		
	6th main Road LHS 8th cross B/S		1	37.00	0.70		25.90		
	6th main Road RHS 8th cross B/S		1	84.00	0.60		50.40		
	6th main Road LHS 9th cross B/S		1	30.00	0.75		22.50		
	6th main Road RHS 9th cross B/S		1	77.00	0.60		46.20		
	6th main Road LHS 10th cross B/S		1	27.00	0.70		18.90		
	6th main Road RHS 10th cross		1	76.00	0.70		53.20		
			For Bad Patches				298.70		
	For profile correction of 20% for DBM						444.86		
	For BC laying						2224.30		
							2967.86	13.2	39175.752
14	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects. (V-III, P.No-33,I No-5.12C of PWD SR 2021-22).								
		Cum							
	Basic Rate	9889							
	Area Weightage 10%	988.9							
	Total Rate	10878							
	Asphalt Road								
	For Bad Patches								
	6th main Road LHS 7th cross B/S		1	36.00	0.90	0.05	1.62		
	6th main Road RHS 7th cross B/S		1	82.00	0.60	0.05	2.46		
	6th main Road LHS 8th cross B/S		1	37.00	0.70	0.05	1.30		
	6th main Road RHS 8th cross B/S		1	84.00	0.60	0.05	2.52		
	6th main Road LHS 9th cross B/S		1	30.00	0.75	0.05	1.13		
	6th main Road RHS 9th cross B/S		1	77.00	0.60	0.05	2.31		
	6th main Road LHS 10th cross B/S		1	27.00	0.70	0.05	0.95		
	6th main Road RHS 10th cross		1	76.00	0.70	0.05	2.66		
							14.94		
	For Profile Correction								
	6th main Road RHS 7th cross B/S		1	82.00	5.50	0.05	22.55		
	6th main Road LHS 8th cross B/S		1	37.00	5.40	0.05	9.99		
	6th main Road RHS 8th cross B/S		1	84.00	5.00	0.05	21.00		
	6th main Road LHS 9th cross B/S		1	30.00	5.00	0.05	7.50		
	6th main Road RHS 9th cross B/S		1	77.00	5.50	0.05	21.18		
	6th main Road LHS 10th cross B/S		1	27.00	6.00	0.05	8.10		

Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	6th main Road RHS 10th cross S/S		1	76.00	5.50	0.05	20.90		
							111.22		
	For Profile Corection Course 20% area						22.24		
							37.18	10877.9	404418.5662
15	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (V-III, P.No.36, I.No.5.16C of PWD SR 2021-22).								
		Cum							
	Basic Rate	11531							
	Area Weightage 10%	1153.1							
	Total Rate	12684							
	For Bad Patches								
	6th main Road RHS 7th cross B/S		1	82.00	5.50	0.04	18.04		
	6th main Road LHS 8th cross B/S		1	37.00	5.40	0.04	7.99		
	6th main Road RHS 8th cross B/S		1	84.00	5.00	0.04	16.80		
	6th main Road LHS 9th cross B/S		1	30.00	5.00	0.04	6.00		
	6th main Road RHS 9th cross B/S		1	77.00	5.50	0.04	16.94		
	6th main Road LHS 10th cross B/S		1	27.00	6.00	0.04	6.48		
	6th main Road RHS 10th cross		1	76.00	5.50	0.04	16.72		
							88.97	12684.1	1128529.745
16	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes.(V-III,I No-8.15, P.No-57 of KPWD SR 2021-22)								
		Sqm							
	Basic Rate	478							
	Area Weightage 10%	47.8							
	Total Rate	525.8							
	6Th Main Road LHS		1	161.00	0.1		16.10		
	6Th Main Road RHS		1	322.00	0.1		32.20		
	6Th main Road LHS 2nd cross LHS		2	78	0.1		15.60		
	6Th main Road LHS 4th cross B/S		2	82	0.1		16.40		
	6Th main Road RHS 4th cross B/S		2	68	0.1		13.60		
	6Th main Road LHS 5th cross B/S		2	66	0.1		13.20		
	6th main Road RHS 5th cross B/S		2	73	0.1		14.60		
	6th main Road LHS 7th cross B/S		2	36	0.1		7.20		
	6th main Road RHS 7th cross B/S		2	82	0.1		16.40		
	6th main Road LHS 8th cross B/S		2	37	0.1		7.40		
	6th main Road RHS 8th cross B/S		2	84	0.1		16.80		
	6th main Road LHS 9th cross B/S		2	30	0.1		6.00		
	6th main Road RHS 9th cross B/S		2	77	0.1		15.40		
	6th main Road LHS 10th cross B/S		2	27	0.1		5.40		
	6th main Road RHS 10th cross		2	76	0.1		15.20		
							211.50	525.8	111206.7

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Sl. No.	Particulars	Unit	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
17	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km (V-III Page No.3, Item No.1.1A & 1.4 A of PWD SR 2021-22)								
		Cum							
	Cost of Haulage (1x2.28x12)	27.36							
	Loading and Unloading	118							
		145.36							
	Area Weightage 10%	14.536							
	Total Rate	159.9							
	Qty frm Item No-1 & 2			3524.62	1.28		4511.51	159.90	721372.16
							Total		24910555.42
							18% GST		4483899.98
							Sub Total		29394455.39
							DPR 1% including GST		300000.00
							PMC 1% including GST		300000.00
							Miscellaneous & Rounding		5544.61
							Grand Total Amount		30000000.00

Assistant Engineer
Kodigehalli Sub Division ,Ward No-12
BBMP Bangalore

Asst. Executive Engineer,
Kodigehalli Sub Division
BBMP Bangalore

Executive Engineer,
Byatarayanapura Division
BBMP Bangalore

Technical Sanction
Accorded For RS 300 Lakhs only
Head of A/C.....
CER NO : 131 Dt: 23.09.2022

ADMINISTRATIVE APPROVAL
Accorded For Rs. 300.00 Lakhs
Head of A/c. P2178
Div. Ref No. 40 Date 19/01/2023
AE EE(BTP)

DTS

BRUHAT BANGALORE MAHANAGARA PALIKE Byatarayanapura Division

Name of the Work : Improvements to Roads, Drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and surrounding areas in Ward no. 08, New Ward no. 12

Draft Tender Schedule

				Project Cost		300.00 Lakhs
				Rate in Rs.		
Sl. No	Description of Item	Unit	Quantity	In Figures	In Words	Amount in Rs.
1	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.	Cum	3524.62			
2	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.	Cum	413.91			
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications	Cum	939.01			
4	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications	Cum	57.44			
5	Removing and Resetting of Slab	Sqm	711.60			
6	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick made of M25 with OPC cement @ 340kgs per Cum with 20 mm and Down size graded granite metal coarse agg @.70 mixed including providing and removing centering, shuttering, shuttering propping etc. for edges of slabs with TMT (Fe500) COM, labor, labor, all Lead and Lift, HOM, Curing, including Cost of reinf. Etc, Complete as directed by the Engineer In charge of Work	Sqm	2259.36			
7	Providing and Fixing pre cast covering Slab 230mm thick made out of CC , Jelly 20mm Down Size with steel reinforcement including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete as per Engineer incharge.	Sqm	100.80			
8	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates	Cum	9.66			
9	Providing and fixing pre cast solid cement concrete kerb stones made out of M20 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete as directed by the Engineer in Charge of the work	Nos	483.00			
10	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surface	Sqm	169.05			

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11	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density	Cum	59.74			
12	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means	Sqm	298.70			
13	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom.	Sqm	2967.86			
14	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects	Cum	37.18			
15	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects	Cum	88.97			
16	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes	Sqm	211.50			
17	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km	Cum	4511.51			

Assistant Engineer
Kodigehalli Sub Division ,Ward No-12
BBMP Bangalore

Asst. Executive Engineer,
Kodigehalli Sub Division
BBMP Bangalore

Executive Engineer,
Byatarayanapura
BBMP Bangalore

"DTS Approved"

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ಯಲಹಂಕ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

DRAWINGS

RCC DRAIN

ASPHALT ROAD

CLIENT:

BRUHAT BANGALORE MAHANAGARA PALIKE

CONSULTANT:

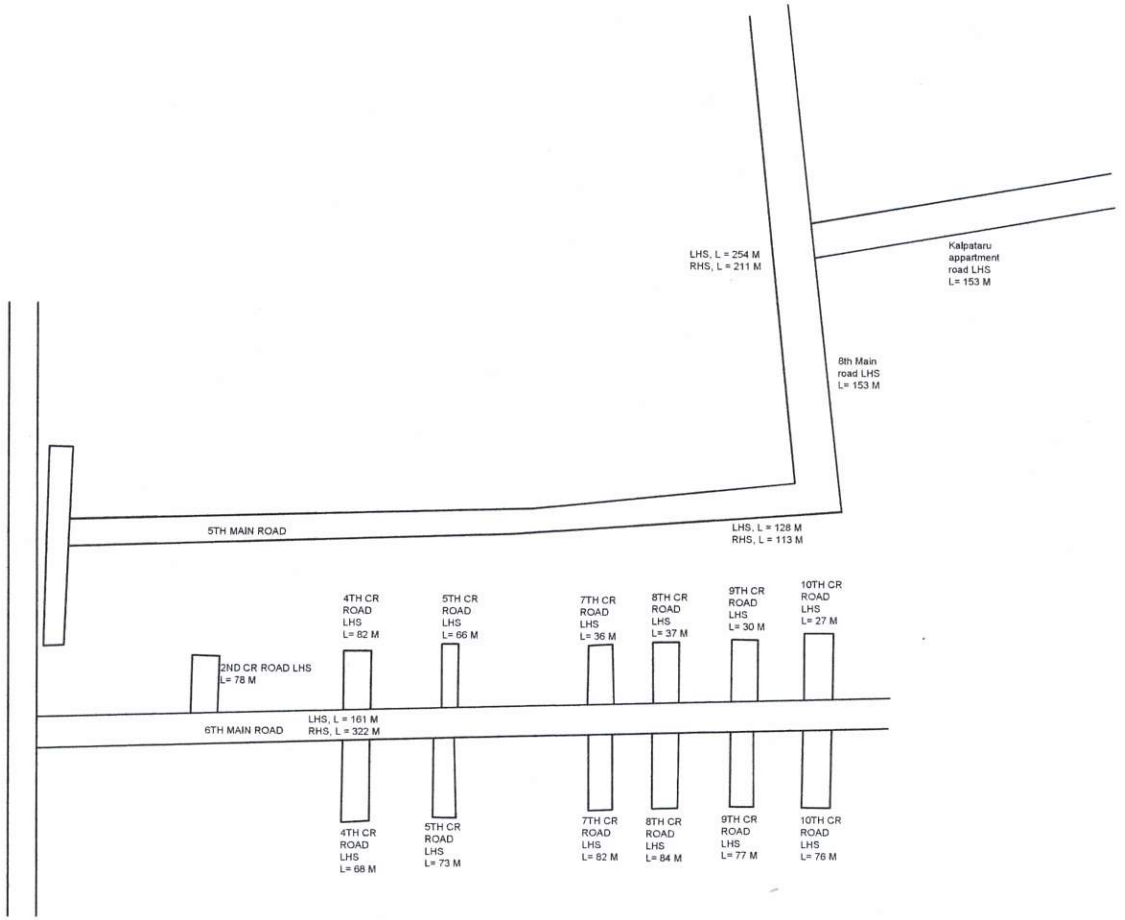
AARTHI ASSOCIATES

PROJECT:- Improvements to road drains and other allied works in Tatanagar, LKR Nagar, Devinagara, Bhadrappa layout and surrounding areas in ward no. 08, New ward no. 12.

Prepared by		TITLE: Drains and Asphalt Roads .	Revisions
Designed by			Rev. / Date / Description
Checked by		GO SLNo.	
Reviewed by			
Date		SCALE : NTS	

Assistant Executive Engineer
Koligehalli Sub Division
BBMP, Bangalore

BHADRAPPA LAYOUT



AARTN ASSOCIATES

ASSISTANT ENGINEER

ASSISTANT EXECUTIVE ENGINEER
KODIGEHALLI SUB-DIVISION
BBMP BANGALORE

CLIENT:

BRUHAT BANGALORE MAHANAGARA PALIKE

CONSULTANT:

AARTN ASSOCIATES
The Smart Construction Solutions
1/1, 1st Cross Sector, nyk Railwheel Factory
Yelahanka New Town, Bangalore-560064
Tel: +91-80-43505503
e-mail: aartnassociates@gmail.com

PROJECT:-

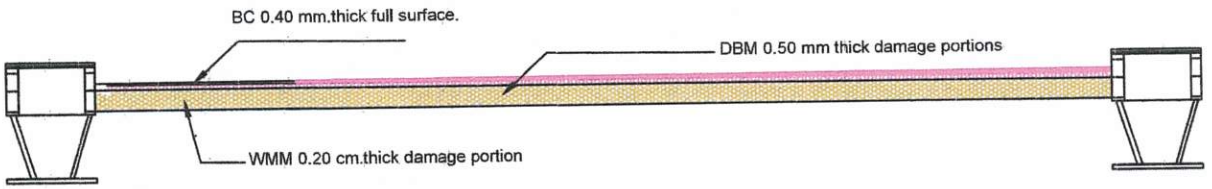
Improvements to road drains and other allied works in Tatanagar, LKR Nagar, Devinagara, Bhadrappa layout and surrounding areas in ward no. 08, New ward no. 12.

Prepared by		Title	Administrative Asphalt Roads
Designed by			
Checked by		GO SI No.	
Reviewed by			
Date		SCALE	NTS

Revisions

Rev.	Date	Description

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore



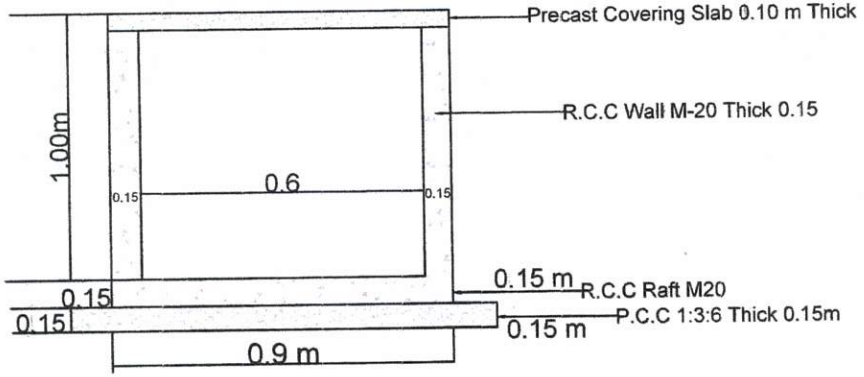
CROSS SECTION OF ASPHALT ROAD

Aartn Associates

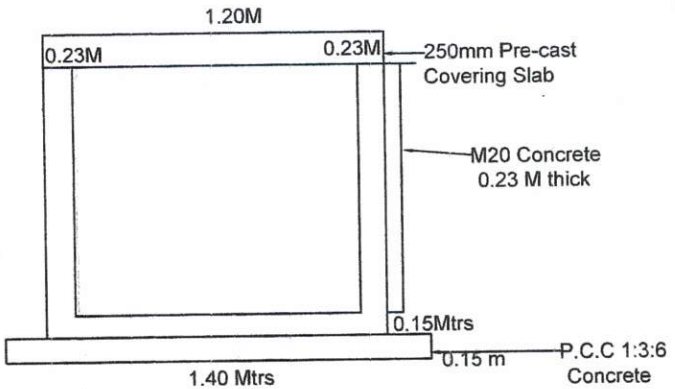
Assistant Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
Bangalore

CLIENT: BRUHAT BANGALORE MAHANAGARA PALIKE	CONSULTANT:- AARTN ASSOCIATES	PROJECT:-	Prepared by / Designed by / Checked by / Reviewed by / Date	TITLE: Cross section details of Asphalt Road GO Sl No. SCALE: NTS	Revisions: Rev / Date / Description — RO



TYPICAL CROSS SECTION OF DRAIN



TYPICAL CROSS SECTION OF RCC CULVERT

Aartn Associates

Assistant Engineer
Kodigehalli Sub Division
Bangalore

Assistant Executive Engineer
Kodigehalli Sub Division
Bangalore

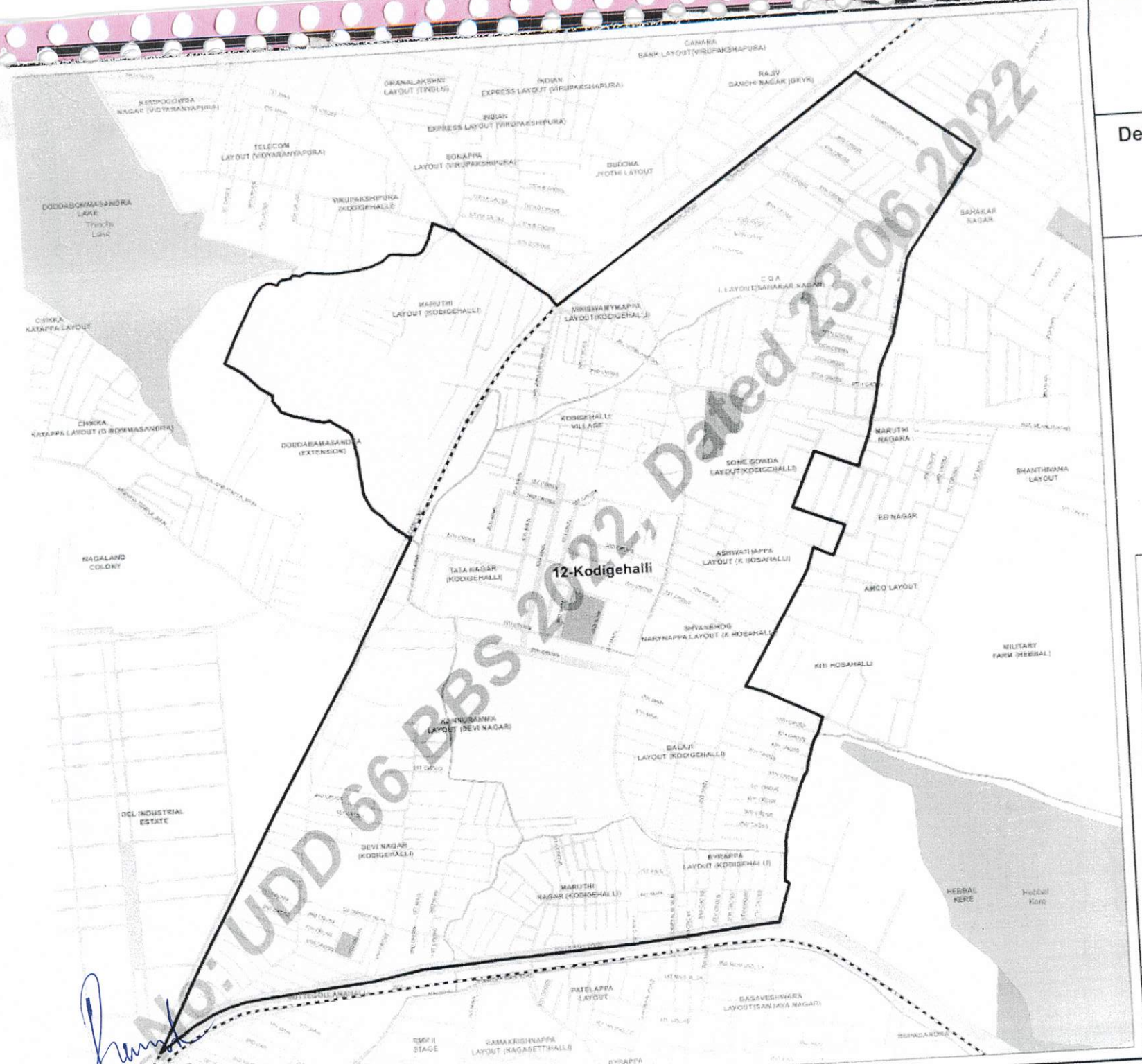
CLIENT:-

BRUHAT BANGALORE MAHANAGARA PALIKE

TITLE
TYPICAL CROSS SECTION OF & DRAIN
RCC Culvert

SCALE

Revisions		
Rev	Date	Description
00		Initial Drawing for Approval



No: UDD 66 BBS 2022, Dated 23.06.2022

N
W E
S

Delimitation of Wards in BBMP - 2(

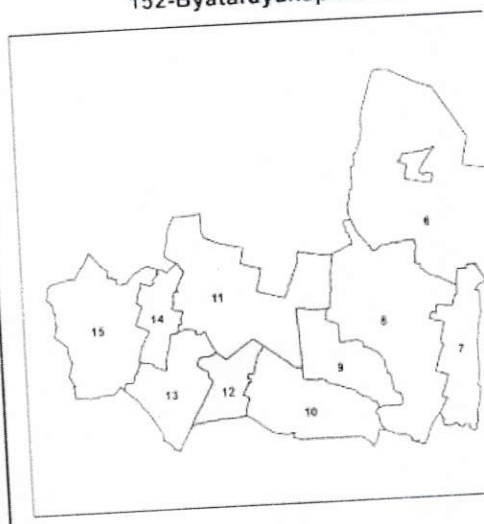
Delimited Ward Name

12-Kodigehalli

Legend

- Delimited Ward Boundary
- Delimited Ward Area
- Road
- Railwayline
- Park
- Tank/ Pond/ Storm Water Drain

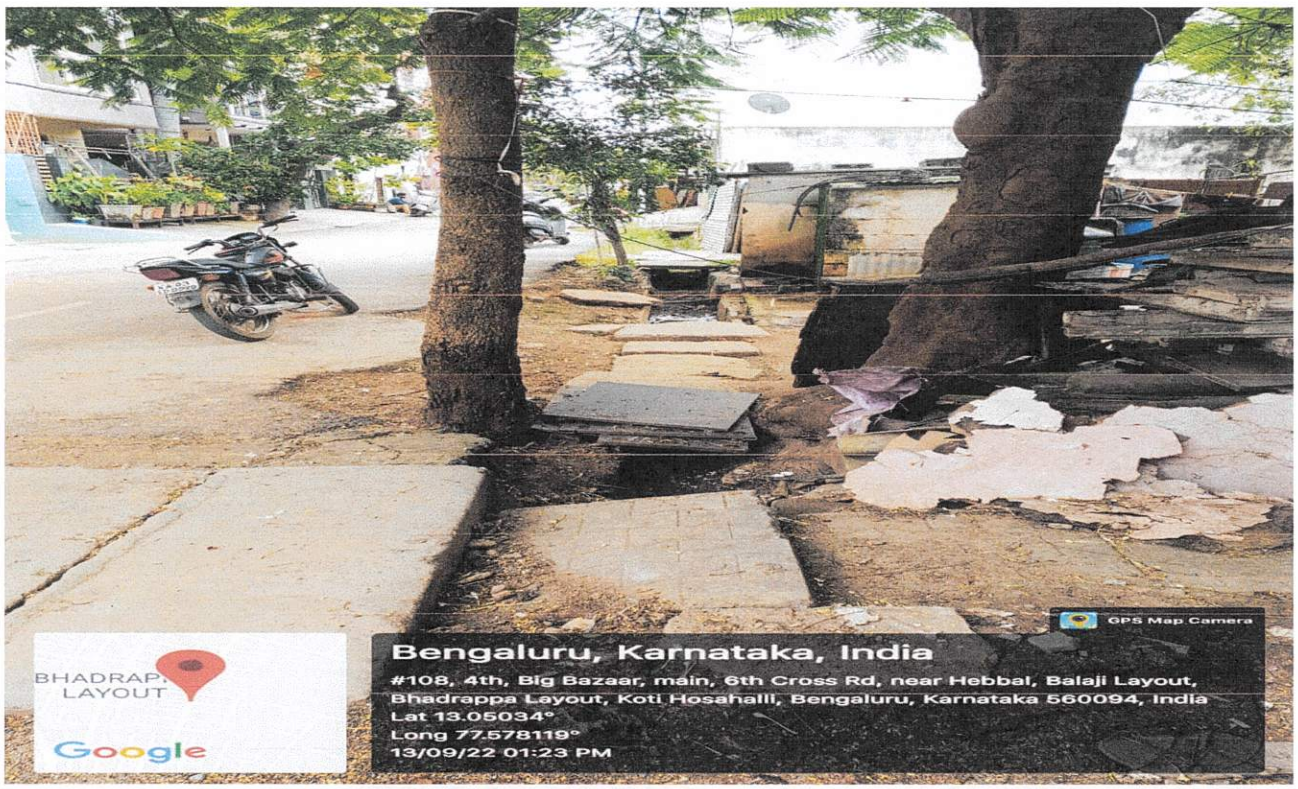
152-Byatarayanapura AC

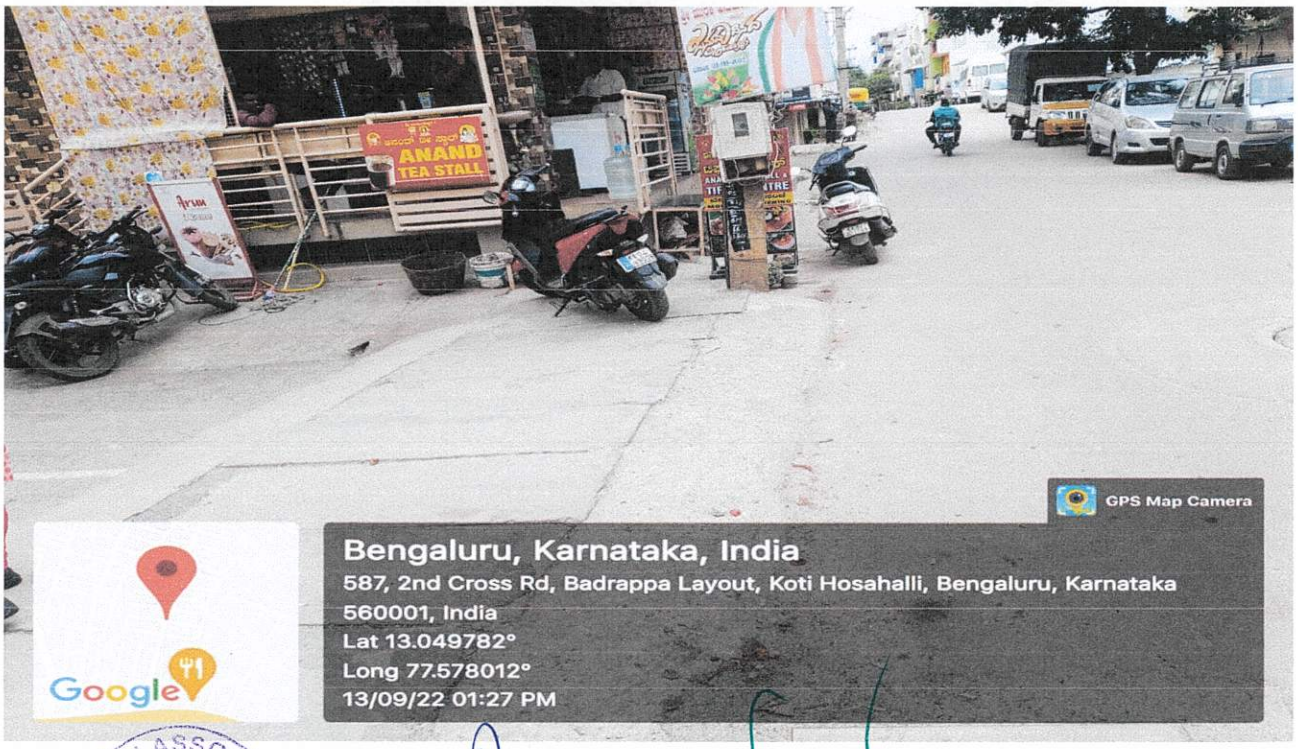


Government of Karnataka Notification
No: UDD 66 BBS 2022, Dated 23.06.202

Delimitation Commissio

Name of the Work: Consultancy Services for Detailed Project Report , Field Survey, General Report, Basic Drawing, Technical Report, Detailed Drawing, Detailed Cost Estimate for Improvements to road drains and other allied works in Tatanagar, LKR Nagar, Devinagar, Bhadrappa Layout and Surrounding areas in ward no-08. New ward No-12





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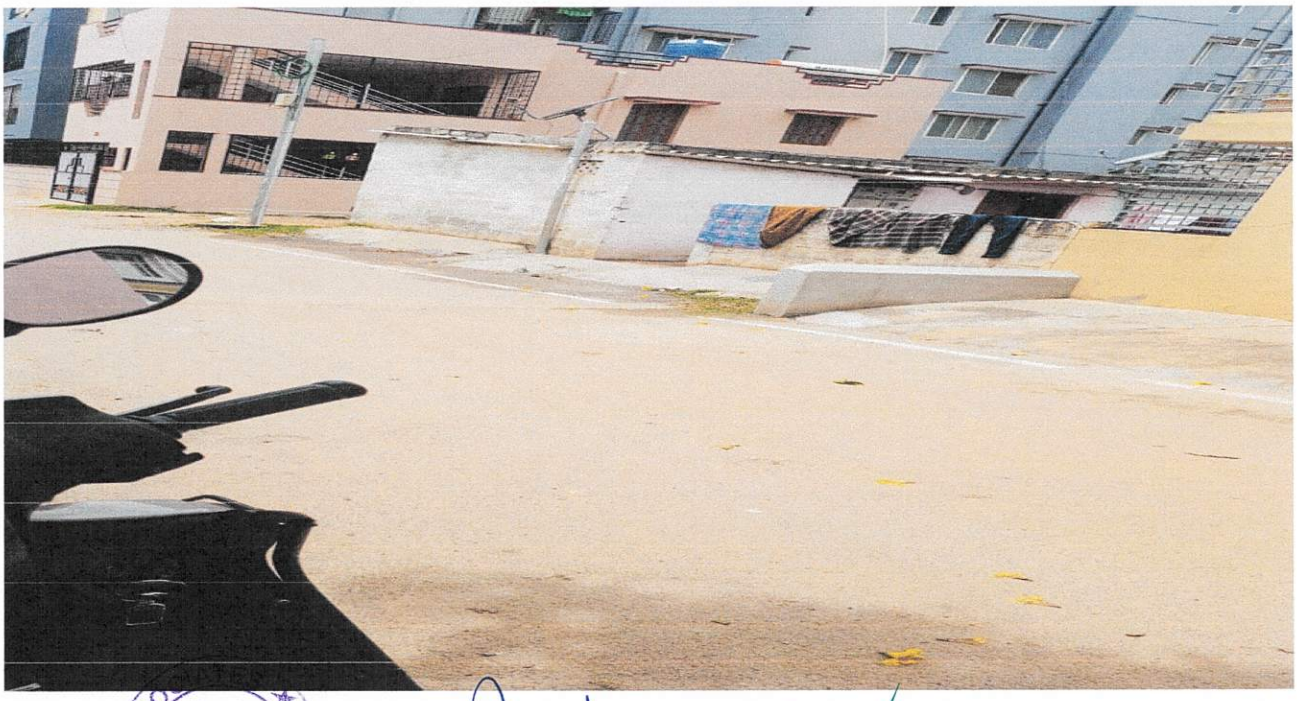

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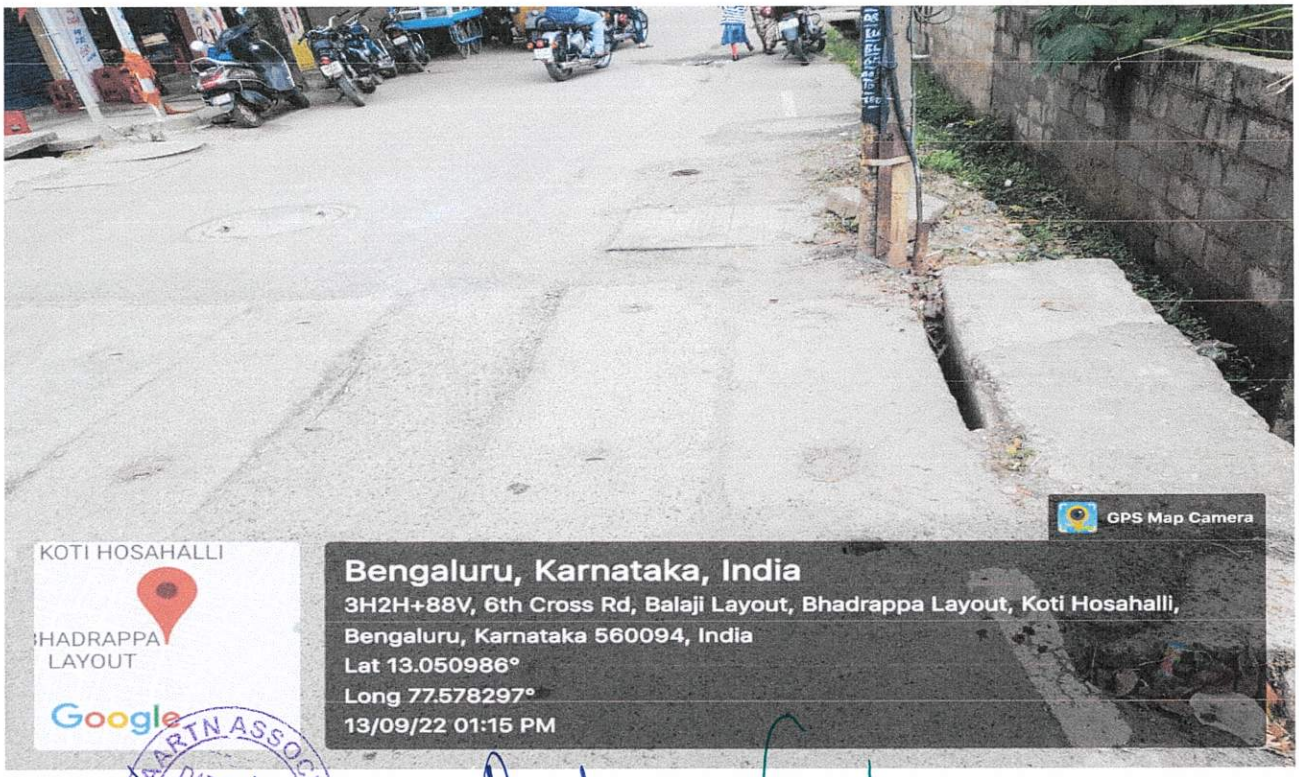

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